Michigan Department of Transportation 5100B (07/07)

CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

Exhibit B

MDOT PROJECT MANAGER	JOB NUMBER (JN)	CONTROL SECTION (CS)
Oladayo Akinyemi	88080C	63192

DESCRIPTION IF NO JN/CS

Design of non motorized path along M-5 from 13 Mile Road to 14 Mile Road, Oakland County

MDOT PROJECT MANAGER: Check all items to be included in RFP.

WHITE = REQUIRED
GRAY SHADING = OPTIONAL

Check the appropriate Tier in the box below

☐ **TIER I ($25,000-$99,999)**	☒ **TIER II ($100,000-$250,000)**	☐ **TIER III (>$250,000)**	**CONSULTANT:** Provide only checked items below in proposal.
☐	☒	☐	Understanding of Service
☐	☐	☐	*Innovations*
☐	☐	☐	*Safety Program*
N/A	☒	☐	Organization Chart
☐	☒	☐	Qualifications of Team
☐	☒	☐	Past Performance
Not required as part of official RFP	Not required as part of official RFP	☐	Quality Assurance/Quality Control
☐	☒	☐	**Location:** The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.
N/A	N/A	☐	Presentation
N/A	N/A	☐	Technical Proposal (if Presentation is required)
3 pages (MDOT forms not counted) **(No Resumes)**	7 pages (MDOT forms not counted)	19 pages (MDOT forms not counted)	Total maximum pages for RFP **not including key personnel resumes**

REQUEST FOR PROPOSAL

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest "Consultant/Vendor Selection Guidelines for Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. **Referenced Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services >Vendor/Consultant Selections.**

RFP SPECIFIC INFORMATION

☑ BUREAU OF HIGHWAYS ☐ BUREAU OF TRANSPORTATION PLANNING ** ☐ OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

☑ NO ☐ YES DATED _____ THROUGH _____

☑ **Prequalified Services** – See page 1 of the attached Scope of Services for required Prequalification Classifications.

☐ **Non-Prequalified Services** - If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed.

☑ **Qualifications Based Selection** – Use Consultant/Vendor Selection Guidelines

For all Qualifications Based Selections, the section team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

****For RFP's that originate in Bureau of Transportation Planning only**, a priced proposal must be submitted at the same time as, but separate from, the proposal. Submit directly to the Contract Administrator/Selection Specialist, Bureau of Transportation Planning **(see address list, page 2)**. The priced proposal must be submitted in a sealed envelope, clearly marked **"PRICE PROPOSAL."** The vendor's name and return address MUST be on the front of the envelope. The priced proposal will only be opened for the highest scoring proposal. Unopened priced proposals will be returned to the unselected vendor(s). Failure to comply with this procedure may result in your priced proposal being opened erroneously by the mail room.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

☐ **Qualifications Review / Low Bid** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted and post the date of the bid opening on the MDOT website. The notification will be posted at least two business days prior to the bid opening. Only bids from vendors that meet proposal requirements will be opened. The vendor with the lowest bid will be selected. The selected vendor may be contacted to confirm capacity.

☐ **Best Value** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

☐ **Low Bid** (no qualifications review required - no proposal required.) See Bid Sheet Instructions below for additional instructions.

BID SHEET INSTRUCTIONS

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet(s) is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked **"SEALED BID."** The vendor's name and return address MUST be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room and the bid being rejected from consideration.

PROPOSAL SUBMITTAL INFORMATION

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER	PROPOSAL/BID DUE DATE	TIME DUE
5	12/12/08	12:00

PROPOSAL AND BID SHEET MAILING ADDRESSES

Mail the multiple proposal bundle to the MDOT Project Manager or Other indicated below.

☑ MDOT Project Manager ☐ MDOT Other

Oladayo Akinyemi, P.E.
Metro Region
18101 W. 9 Mile Road
Southfield, Michigan 48075

Mail one additional stapled copy of the proposal to the Lansing Office indicated below.

	Lansing Regular Mail	OR	Lansing Overnight Mail
☑	Secretary, Contract Services Div - B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Secretary, Contract Services Div - B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933
☐	Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933

GENERAL INFORMATION

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least four (4) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet
5100G – Certification of Availability of Key Personnel
5100I – Conflict of Interest Statement

(These forms are not included in the proposal maximum page count.)

Michigan Department of Transportation

SCOPE OF SERVICE
FOR
DESIGN SERVICES

CONTROL SECTION: 63192

JOB NUMBER: 88080C

PROJECT LOCATION:
The project is located within the western right-of-way of M-5 from 13 Mile road to 14 Mile road in the city of Novi, Oakland County. The project length is approximately 1.0 mile.

PROJECT DESCRIPTION:
The project consist of all work related to the design of a non-motorized path within the western right-of-way of M-5 between 13 Mile road and 14 Mile road including, but not limited to the analysis and design of drainage structures, minor landscaping, traffic signals, and maintenance of traffic.

PRIMARY PREQUALIFICATION CLASSIFICATIONS:
Roads and Streets

SECONDARY PREQUALIFICATION CLASSIFICATIONS:
Road Design Surveys
*Geotechnical Engineering Services
Maintaining Traffic Plans and Provisions
Hydraulics
Utility Coordination
Traffic Signal Design
*Pavement Marking Plans
*Landscape Architecture

*** These services are precautionary and may not necessarily be utilized.**

ANTICIPATED SERVICE START DATE: January, 2009

ANTICIPATED SERVICECOMPLETION DATE: November, 2009

DBE REQUIREMENT: N/A

MDOT PROJECT MANAGER:

Oladayo Akinyemi, P.E.,
Michigan Department of Transportation - Metro Region
18101 W. 9 Mile Road,
Southfield, MI 48075
PH: 248-483-5121
248-569-0621 (Fax)
E-mail: akinyemio@michigan.gov

CONSTRUCTION COST:

A. The estimated total cost of construction is: **$ 750,000**

The Consultant is expected to design the project within the programmed amount.

If at any time the estimated cost of construction varies by more than 5% of the current programmed amount, then the Consultant will be required to submit a letter to the MDOT Project Manager justifying the changes in the construction cost estimate.

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Standard Plans, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Guide for the Development of Bicycle Facilities, Michigan Manual of Uniform Traffic Control Devices, etc.).

Consultant is required to use MDOT's current version of Bentley MicroStation for CADD applications and Bentley GEOPAK for road design. Consultant shall comply with all MDOT CADD standards and file naming conventions.

CONSULTANT RESPONSIBILITIES:

The Consultant shall be responsible to meet with the MDOT Project Manager to review project, location of data sources and contact persons, and review relevant MDOT operations. The Consultant shall review and clarify project issues, data needs and availability, and the sequence of events and team meetings that are essential to complete the design by the project plan completion date. Attention shall be given to critical target dates that may require a large lead time, such as utility conflict resolution, local agency meetings, obtaining required permits, etc.

The Consultant shall also complete the design of this project including, but not limited to the following:

A. Perform a drainage study and related design.

B. Prepare required plans, typical cross-sections, details, and specifications required for design and construction of the non-motorized path.

C. Compute and verify all plan quantities.

D. Prepare staging plans and special provisions for maintaining traffic during construction.

E. Perform the Utility Coordination for the project.

F. Provide solutions to any unique problems that may arise during the design of this project.

G. The Consultant may be required to provide Design Services during the construction phase of this project. If Construction Assistance is required, then a separate authorization for those services will be issued.

H. Maintain a Design Project Record which includes a history of significant events (changes, comments, etc.) which influenced the development of the plans, dates of submittals and receipt of information.

I. Submit the excavation locations which may contain contamination. Project Manager then can proceed in requesting a Preliminary Project Assessment (PPA).

J. The Consultant representative shall record and submit type-written minutes for all project related meetings to the MDOT Project Manager within one weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees. MDOT will provide and distribute official meeting minutes for the Plan Review Meeting.

K. The Consultant will provide to MDOT at the scheduled submittal dates, copies of the required specifications and plan set materials for distribution by MDOT for all reviews for this project with the exception of The Plan Review. The Consultant shall contact the project manager prior to the submittal dates for the exact number of copies that will be required for submittal.

L. Prepare and submit electronically (native format or Adobe PDF) any information, calculations, hydraulic studies, or drawings required by MDOT for acquiring any permit (ie. NPDES, DEQ, etc), approvals (i.e. county drain commission) and related mitigation. MDOT will submit permit requests.

M. Attend any project-related meetings as directed by the MDOT Project Manager.

N. Attend information meetings (i.e., public hearings, open houses, etc.) with the public and public officials to assist in responding to concerns and questions. May require the preparation of displays such as maps, marked-up plans, etc.

O. The Consultant shall assist in the review of utility permit requests, incorporate the information in the design plans, and respond within one week from receipt of the permit.

P. The MDOT Project Manager shall be the official MDOT contact person for the Consultant **and shall be made aware of all communications regarding this project**. The Consultant must either address or send a copy of all correspondence to the MDOT Project Manager. This includes all Subcontractor correspondence and verbal contact records.

Q. The Consultant shall contact the MDOT Project Manager whenever discoveries or design alternatives have the potential to require changes in the scope, limits, quantities, costs, or right-of-way of the project.

UTILITIES

The Consultant shall be responsible for obtaining and showing on the plans the location and names of all existing utilities within the limits of the project. In the course of resolving utility conflicts, the Consultant shall make modifications to the plans or design details and provide assistance as directed by the MDOT Utility Permits Engineer and/or Project Manager. The Consultant shall attend any utility meetings called to ensure that the concerns are addressed on the plans involving utilities. The Consultant shall assist in the review of utility permit requests to ensure compatibility with the project. The Consultant will be responsible for miscellaneous staking of utilities. (See Attachment C)

TRAFFIC CONTROL AND MDOT PERMITS

The Consultant shall be responsible for all traffic control required to perform the tasks as outlined in this Project Scope of Design Services.

The Consultant shall be responsible for obtaining up to date access permits and pertinent information for tasks in MDOT Right of Way (ROW). This information can be obtained through Joe Rios, Utilities/Permits Section, Real Estate Division at (517) 241-2103.

MONTHLY PROGRESS REPORT

On the first of each month, the Consultant Project Manager shall submit a monthly project progress report to Dayo Akinyemi, MDOT Project Manager. The monthly progress report shall follow the guidelines in Attachment E.

MDOT RESPONSIBILITIES:

MDOT will perform the following:

A. Furnish the consultant with the soil properties and survey information.

B. Schedule and/or conduct the following:
   1. Project related meetings.
   2. The Plan Review
   3. Utility Meetings.
   4. Quantity summary sheets and final item cost estimates.
   5. Packaging of plans and proposal.

C. Furnish Special Details and pertinent reference materials.

D. Furnish prints of an example of a similar project and old plans of the area, if available.

E. Obtain all permits for the project as outlined in previous section.

F. Coordinate any necessary utility relocation.

G. Furnish pavement core and soil boring information as necessary (Consultant shall place information on plan sheets).

H. Pavement design.

I. Furnish FTP site for software download and instructions for the MDOT Stand Alone Proposal Estimator's Worksheet (SAPW).

J. Geotechnical Engineering Services

DELIVERABLES:

The Consultant shall deliver all computer files associated with the project in their native format (spreadsheets, CADD files, GEOPAK files, etc.) on DVD, CD and/or uploaded to ProjectWise, as directed by the MDOT Project Manager. All CADD/GEOPAK files shall be created and identified with standard MDOT file names as shown in Appendix A of the Road Design Manual. It is the Consultant's responsibility to obtain up to date MicroStation and GEOPAK seed/configuration files necessary to comply with MDOT's CADD standards which are posted to the bulletin board system. When the use of GEOPAK road design software is necessary to develop plans all pay items shall be placed into the CADD file using GEOPAK's Design and Computation Manager so that Quantity Manager can be used to transfer pay item information to SAPW/Trns*port. Any CADD/GEOPAK files that do not conform to MDOT standards will be returned to the Consultant for correction at the Consultant's expense.

Proposal documents shall be submitted in their native format with standard naming conventions as well as combined into one Adobe PDF file in the sequence specified by MDOT. To provide text search capabilities the combined proposal shall be created by converting native electronic files to PDF. Scanning to PDF is discouraged except in instances where it is necessary to capturing a legally signed document or a hard copy version of a document is all that exists.

Plan files shall be submitted in their native dgn format with standard naming conventions as well as plotted into a combined Adobe PDF file. Plan sheets shall be plotted to Adobe PDF with full text search and level on/off capabilities in half size (11" x 17") formats. A full size title sheet shall be plotted stamped and signed then scanned for inclusion with the Adobe PDF set. The original title sheet will be sent to the MDOT Project Manager.

Stand Alone Proposal Estimator's Worksheet (SAPW) shall be used to generate the txt and csv files necessary for import into the Trns*port bid letting software. The SAPW files shall be transmitted electronically by the method specified by the MDOT Project Manager.

The project will require a ratio (scale) of **1:40 (English Units)**

Other plan sheets that are required for this project shall be completed by the Consultant. These include, but are not limited to the following plan sheets:

A. The title sheet. MDOT will provide a map of the area on a disk in our workstation format. If the map is not available, MDOT will provide a map that could be used.

The Consultant shall be responsible for any revisions to the title sheet and the title sheet and map shall meet MDOT format and layout guidelines.

B. Note Sheet.

C. Typical Cross-Sections.

D. Project specific Special Details.

E. Alignment Sheet.

F. Detail grade sheets for critical areas.

G. Pavement marking plan(s).

H. Witness and benchmark sheet(s).

J. Soil boring log sheet(s).

All plans, special provisions, estimates, and other project related items shall meet all MDOT requirements and detailing practices (i.e., format, materials, symbols, patterns, and layout) or as otherwise directed by the Project Manager.

All plans, specifications, and other project related items are subject to review and approval by MDOT.

PROJECT SCHEDULE:

The Consultant shall use the following events to prepare the proposed implementation schedule as required in the Guidelines for the Preparation of Responses on Assigned Design Services Contracts. These dates shall be used in preparing the Consultant's Monthly Progress Reports. The Consultant and the Project Manager will work together to determine the dates for the remaining project milestones. The Consultant may be required to make plan changes after the Consultant Plan turn in date due to specification updates and QA comments after the MDOT Plan Turn In.

Target Date	**Task #**	**Description**
01/05/09	3140	*Anticipated Authorization*
	3540	Develop the Maintaining Traffic Plan
	3590	Review Preliminary Plans (Hold the Plan Review Meeting)
	3830	Complete the Maintaining Traffic Plan
	3840	Develop Final Plans and Specifications
05/15/09	3870	Hold Omissions/Errors Check (OEC) Meeting Submit Final Plan/Proposal Package to MDOT for final review. Consultant's Plan Turn In
06/12/09		MDOT Plan Turn In
09/04/09		Letting
10/30/09		Final Deliverables to MDOT

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

Please indicate with a check in the box next to each task number whether you believe that task will require consultant involvement on the job. Milestones (a specific event at a point in time) are italicized and underlined. See the P/PMS Task Manual for more details.

STUDY (EARLY PRELIMINARY ENGINEERING)

		P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY
YES	NO		(mm/dd/yyyy)
		EPE SCOPING ANALYSIS	
☐	☐	2120 Prepare Traffic Analysis Report	__/__/____
☐	☐	2130 Prepare Project Justification	__/__/____
☐	☐	*213M Concurrence by Regulatory Agencies with the Purpose and Need*	__/__/____
☐	☐	2140 Develop and Review Illustrative Alternatives	__/__/____
☐	☐	2155 Request/Perform Safety Analysis	__/__/____
☐	☐	2160 Prepare and Review EIS Scoping Document	__/__/____
☐	☐	*211M Public Information Meeting*	__/__/____
		EPE DRAFT ANALYSIS	
☐	☐	2310 Conduct Technical SEE Studies	__/__/____
☐	☐	2321 Prepare for Aerial Photography	__/__/____
☐	☐	2322 Finish/Print Aerial Photography	__/__/____
☐	☐	2330 Collect EPE Geotechnical Data	__/__/____
☐	☐	2340 Develop and Review Practical Alternatives	__/__/____
☐	☐	*233M Aerial Photography Flight*	__/__/____
☐	☐	2360 Prepare and Review EA or DEIS	__/__/____
☐	☐	*231M Draft Submission to FHWA*	__/__/____
☐	☐	2380 Circulate EA or DEIS	__/__/____
☐	☐	*232M Public Hearing*	__/__/____
		EPE FINAL ANALYSIS	
☐	☐	2510 Determine and Review Recommended Alternative	__/__/____
☐	☐	*250M Concurrence by Regulatory Agencies with Recommended Alternatives*	__/__/____
☐	☐	2525 Prepare and Review Engineering Report	__/__/____
☐	☐	2530 Prepare and Review Request for FONSI or FEIS	__/__/____
☐	☐	*252M Final Submission to FHWA*	__/__/____
☐	☐	2550 Obtain FONSI or ROD	__/__/____
		CONTAMINATION INVESTIGATION	
☐	☐	2810 Project Area Contamination Survey (PCS)	__/__/____
☐	☐	2820 Preliminary Site Investigation (PSI) for Contamination	__/__/____

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

PRELIMINARY ENGINEERING - DESIGN

		P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY
YES	NO		(mm/dd/yyyy)
		DESIGN SCOPE VERIFICATION AND BASE PLAN PREPARATION	
☐	X	3130 Verify Design Scope of Work and Cost	__/__/____
☐	X	3310 Prepare Aerial Topographic Mapping	__/__/____
☐	X	3320 Conduct Photogrammetric Control Survey	__/__/____
☐	X	3321 Set Aerial Photo Targets	__/__/____
☐	X	3330 Conduct Design Survey	__/__/____
☐	X	3340 Conduct Structure Survey	__/__/____
☐	X	3350 Conduct Hydraulics Survey	__/__/____
☐	X	3360 Prepare Base Plans	__/__/____
X	☐	*331M Utility Notification*	__/__/____
☐	X	3361 Review and Submit Preliminary ROW Plans	__/__/____
☐	X	*331M Preliminary ROW Plans Distributed*	__/__/____
☐	X	3370 Prepare Structure Study	__/__/____
☐	X	3375 Conduct Value Engineering Study	__/__/____
☐	X	3380 Review Base Plans	__/__/____
☐	X	*332M Base Plan Review (Pre-GI Inspection)*	__/__/____
☐	X	3390 Develop the Maintaining Traffic Concepts	__/__/____
		PRELIMINARY PLANS PREPARATION	
X	☐	3510 Perform Roadway Geotechnical Investigation	__/__/____
☐	X	3520 Conduct Hydraulic/Hydrologic and Scour Analysis	__/__/____
X	☐	3522 Conduct Drainage Study, Storm Sewer Design, and use Structural Best Management Practices	__/__/____
☐	X	3530 Conduct Structure Foundation Investigation	__/__/____
☐	X	3535 Conduct Structure Review for Architectural and Aesthetic Improvements	__/__/____
X	☐	3540 Develop the Maintaining Traffic Plan	__/__/____
X	☐	3551 Prepare/Review Preliminary Traffic Signal Design Plan	__/__/____
☐	X	3552 Develop Preliminary Pavement Marking Plan	__/__/____
☐	X	3553 Develop Preliminary Non-Freeway Signing Plan	__/__/____
☐	X	3554 Develop Preliminary Freeway Signing Plan	__/__/____
☐	X	3555 Prepare/Review Preliminary Traffic Signal Operations	__/__/____
☐	X	3570 Prepare Preliminary Structure Plans	__/__/____
X	☐	3580 Develop Preliminary Plans	__/__/____
X	☐	3581 Review and Submit Final ROW Plans	__/__/____
X	☐	*351M Final ROW Plans Distributed*	__/__/____
X	☐	3590 Review Preliminary Plans (Hold Plan Review Meeting)	__/__/____
X	☐	*352M THE Plan Review (Grade Inspection)*	__/__/____

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

PRELIMINARY ENGINEERING - DESIGN (cont'd)

		P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY
YES	NO		(mm/dd/yyyy)
		UTILITIES	
X	☐	3610 Compile Utility Information	__/__/____
☐	X	3650 Coordinate RR Involvement for Grade Separations	__/__/____
☐	X	3655 Coordinate RR Involvement for At-Grade Crossings	__/__/____
X	☐	3660 Resolve Utility Issues	__/__/____
X	☐	*360M Utility Conflict Resolution Plan Distribution*	__/__/____
X	☐	*361M Utility Meeting*	__/__/____
☐	X	3670 Develop Municipal Utility Plans	__/__/____
☐	X	3672 Develop Special Drainage Structures Plans	__/__/____
☐	X	3675 Develop Electrical Plans	__/__/____
		MITIGATION/PERMITS	
X	☐	3710 Develop Required Mitigation	__/__/____
X	☐	3720 Submit Environmental Permit Applications	__/__/____
X	☐	3730 Obtain Environmental Permit	__/__/____
		FINAL PLAN PREPARATION	
X	☐	3821 Prepare/Review Final Traffic Signal Design Plan	__/__/____
X	☐	3822 Complete Permanent Pavement Marking Plan	__/__/____
☐	X	3823 Complete Non-Freeway Signing Plan	__/__/____
☐	X	3824 Complete Freeway Signing Plan	__/__/____
☐	X	3825 Prepare/Review Final Traffic Signal Operations	__/__/____
X	☐	3830 Complete the Maintaining Traffic Plan	__/__/____
X	☐	3840 Develop Final Plans and Specifications	__/__/____
X	☐	*380M Plan Completion*	__/__/____
☐	X	3850 Develop Structure Final Plans and Specifications	__/__/____
X	☐	3870 Hold Omissions/Errors Check (OEC) Meeting	__/__/____
X	☐	*387M Omissions/Errors Checks Meeting*	__/__/____
X	☐	*389M Plan Turn-In*	__/__/____
☐	X	3880 CPM Quality Assurance Review	__/__/____

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

PRELIMINARY ENGINEERING – RIGHT OF WAY

		P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY
YES	NO		(mm/dd/yyyy)
		EARLY RIGHT OF WAY WORK	
☐	X	4120 Obtain Preliminary Title Commitments	__/__/____
☐	X	4130 Prepare Marked Final Right Of Way Plans	__/__/____
☐	X	*413M Approved Marked Final ROW*	__/__/____
☐	X	4140 Prepare Property Legal Instruments	__/__/____
		ROW ACQUISITION	
☐	X	4411 Preliminary Interviews	__/__/____
☐	X	*441M Post-Decision Meeting*	__/__/____
☐	X	4412 Real Estate Services Assignment Proposal and Fee Estimate (Form 633s) for Appraisal Work Authorization	__/__/____
☐	X	4413 Appraisal Reports	__/__/____
☐	X	4420 Appraisal Review Reports	__/__/____
☐	X	4430 Acquire Right Of Way Parcels	__/__/____
☐	X	4510 Conduct Right Of Way Survey & Staking	__/__/____
		ROW RELOCATION	
☐	X	4710 Relocation Assistance	__/__/____
☐	X	4720 Prepare Improvement Removal Plan	__/__/____
☐	X	*442M ROW Certification*	__/__/____

CONSULTANT PAYMENT – Actual Cost Plus Fixed Fee:

Compensation for this project shall be on an **actual cost plus fixed fee** basis. This basis of payment typically includes an estimate of labor hours by classification or employee, hourly labor rates, applied overhead, other direct costs, subconsultant costs, and applied fixed fee.

All billings for services must be directed to the Department and follow the current guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's website. This document contains instructions and forms that must be followed and used for billing. Payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for services rendered shall not exceed the maximum amount unless an increase is approved in accordance with the contract with the Consultant. Typically, billings must be submitted within 60 days after the completion of services for the current billing. The final billing must be received within 60 days of the completion of services. Refer to your contract for your specific contract terms.

Direct expenses, if applicable, will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted with the billing for all eligible expenses on the project in accordance with the Reimbursement Guidelines. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this project.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer/Bureau Director and the MDOT Project Manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the priced proposal submitted by the Consultant and must have prior written approval by the MDOT Region Engineer/Bureau Director and the MDOT Project Manager.

The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.

ATTACHMENT B
CS 63192 - JN 88080C

SCOPE OF WORK FOR DRAINAGE STUDY

The Consultant is to conduct a site investigation of the drainage within the limits of the project. The purpose of this study is to determine where hydraulic analyses and/or surveys are required. If further hydraulic analyses and/or surveys are required, then MDOT will issue a separate authorization for those services.

Work Steps:

1. Prepare a typed report summarizing the drainage affected by the project. For each culvert carrying natural drainage within the MDOT Right-of-Way, provide the following information:

    a. Stream name
    b. Exact location of the culvert, including Section, Town, Range, and Township
    c. Size, type, and condition of culvert
    d. Any evidence of scour or erosion
    e. Any evidence that the structure is undersized
    f. Any county drains
    g. Photographs of the upstream face, downstream face, looking upstream, and looking downstream, as well as any drainage structures, buildings, or farmland that may affect or be affected by the culvert
    h. Drainage area, including delineation on a USGS quadrangle map (or local contour map, if more up-to-date)
    i. Type of work proposed, including existing and proposed lengths

2. The report must include any other effects on the drainage; for example, a raise in road grade or widening.

3. Submit the drainage study to the MDOT Project Manager for review and approval by the Design Engineer – Hydraulics/Hydrology.

4. Receive any items returned by the MDOT Project Manager as incomplete or deficient.

    Make necessary changes and resubmit the incomplete items, including a written response to all comments.

ATTACHMENT C
CS 63192 - JN 88080C

SCOPE OF WORK FOR UTILITY COORDINATION

For the purpose of this scope "utility coordination" means the Consultant shall participate in all stages of the Department's utility coordination process. It is the intent of this scope that the Consultant selected as a result of this solicitation employs qualified, competent, and experienced personnel to provide the services set forth herein.

The Consultant selected shall be capable of providing the following services pertaining to utility coordination work, including, but not limited to:

1. Identification of existing/proposed utility owners and their facilities.
2. Resolution of conflicts between utility facilities and proposed construction.
3. Documentation of utility company activities.
4. Evaluation and certification of utility relocation schedules for compatibility to the Department's project schedule.

GENERAL REQUIREMENTS

The Consultant is responsible for taking the necessary steps to insure appropriate utility coordination for the project. The Consultant is expected to participate in all stages of the MDOT utility coordination process, including but not limited to the following: scope meetings, design meetings, pre-advertisement meetings, pre-construction meetings, field inspections, utility permit reviews, plan reviews, and construction phase services. In addition, the Consultant shall provide the following services:

1. Schedule and conduct utility meetings, as necessary, to resolve conflicts between utility facilities and proposed construction. Moderate and record meeting minutes, distribute to all in attendance plus the appropriate MDOT Region/TSC Utilities/Permits Engineer and the MDOT Project Manager. The meetings, as a minimum will identify conflicts, discuss possible design modifications, develop utility relocation schemes, review the schedule of MDOT construction activities, and develop a coordinated utility activity schedule. Include resolution of all utility conflicts and utility coordination needs in the proposed project schedule.

2. Provide bi-weekly status reports to the appropriate MDOT Region/TSC Utilities/Permits Engineer, MDOT Project Manager and the MDOT Lansing Utilities-Permits office and any other appropriate personnel as directed by the MDOT Project Manager. The report, at a minimum, should display the control section, project number, project location and description, report date, status of each utility and date information is expected back or when action is to be taken. Develop and maintain a status report (i.e. spreadsheet, log, etc.) regarding the project's utility status. Depending on the project, these status reports may be reduced to monthly, at the request of the Project Manager.

3. Conduct or participate in meetings convened for the purpose of utility betterments (i.e. new water main and communication facilities, etc.). Develop corridor schemes and utility construction schedules.

4. Provide technical assistance to MDOT's Design Division and design consultants regarding utility relocations and project impacts. Assure that all proposed utility relocation work, either private or municipal force account work, is compatible with the proposed project and meets MDOT and other applicable standards.

5. Review utility relocation plans for compatibility with the proposed MDOT project. Confirm that all necessary utility relocation permits are submitted to the appropriate MDOT Region/TSC Utilities/Permits Engineer for issuance. Follow-up with utility companies to ensure that their utility relocations are progressing and will not adversely affect the project's schedule.

6. Prepare a Notice to Bidders Utility Coordination Clause. This needs to be submitted to the appropriate MDOT Region/TSC Utilities/Permits Engineer by a deadline to be determined by the Project Manager.

7. The Consultant may be required to provide Design Services during the construction phase of this project, including utility alignment staking and inspection. If Construction Assistance is required, then a separate authorization for those services will be issued.

PLAN DISTSRIBUTION AND UTILITY INFORMATION PROCUREMENT

The Consultant will be required to distribute plans on an as-needed basis to the utility companies. At a minimum the following distributions shall take place:

1. The Consultant shall verify that base plans have been sent to utility companies within the project area. This will consist of an informational letter and two sets of preliminary plans (some companies may require four sets), describing the scope of the project. Initial contact should be made with all utility companies that may have facilities in the project area. Four to six weeks should be allowed for utility companies to respond back with one set of marked plans showing their facilities, copies of their "As Built" plans, or written confirmation that they have no facilities in the project area. This information will then be forwarded to the Design Project Manager.

2. Collect and compile utility company responses from each utility company. Follow up with non-responsive utility companies to ensure a response is received. Establish design contacts and if different, construction contacts for the project. Review the plan note sheets and verify with the utility company that the utility company names, addresses, contacts and phone numbers are accurate.

3. Distribute Department plans at approximately 50 percent completion. These plans should have the utility locations plotted and provide sufficient detail for utility companies and the utility coordinator to determine conflicts (i.e. storm sewer design). The Department's standard plan distribution letter, authorizing utility companies to begin preliminary

engineering and also notifying the utility company of their responsibility to relocate facilities under Act 368, P.A. of 1925, needs to be included with this plan distribution.

4. Copies of any correspondence sent to any utility company should be sent to the appropriate MDOT Region/TSC Utilities/Permits Engineer, MDOT Project Manager and the MDOT Lansing Utilities-Permits Office and any other appropriate personnel unless otherwise directed.

PERMIT REVIEWS

Review utility relocation plans and new permit applications for compatibility with the proposed MDOT project. Confirm that all necessary utility relocation permits are submitted to the appropriate MDOT Region/TSC Utilities/Permits Engineer for issuance. To ensure that utility relocations are progressing and will not adversely affect the project's schedule, follow up with the appropriate utility companies.

REIMBURSABLE UTILITY RELOCATIONS

Ensure that eligible reimbursable utility relocations, under Federal-Aid Policy Guide 23 CFR 645A and 645B and MDOT Utility Accommodation Policy are identified. Confirm that the utility companies submit the necessary information (i.e. permit applications, property rights, estimates, etc.) as to meet the aforementioned guidelines to the appropriate MDOT Region/TSC Utilities/Permits Engineer for processing and authorization.

DESIGN ANALYSIS AND RECOMMENDATIONS

When the Consultant has obtained all necessary utility information, the Consultant shall determine to what extent the proposed roadway and/or bridge improvements will impact the existing utilities. The Consultant shall prepare a report outlining avoidance alternates, required adjustments, relocations, and cost estimates to perform those relocations.

STAKING, PERMIT INSPECTION AND CONSTRUCTION PHASE SERVICES

The Consultant may be requested to provide any needed alignment staking for utility relocations. Staking shall be consistent with the project's survey control. The Consultant will be responsible for the accuracy, per applicable survey standards, when performing survey work. The Consultant performing any surveys must be on the Department's pre-approved surveyors list.

The Consultant may be asked to oversee and inspect utility relocations. Reports of this activity and the Department's Permit Inspection Report (Form #2213) will need to be sent to the appropriate Region/TSC Utilities/Permits Engineer.

Construction phase services may be requested. This may include attending the preconstruction meeting and presenting the utility coordination work. It also may involve working with the Department's Resident Engineer and utility company to resolve utility conflicts discovered during construction. If Construction Assistance is required, then a separate authorization for those services will be issued.

CERTIFICATION

This certification will include all necessary copies of correspondence and will be signed by a duly authorized representative of the firm. After certification, the project files will be forwarded to the appropriate MDOT Region/TSC Utilities/Permits Engineer. The Consultant will certify to the MDOT Region/TSC Utilities/Permits Engineer the following:

1. All utility work has been completed or that all arrangements have been made for it to be undertaken and completed as required for proper coordination with the projects construction schedule.

2. Plans were sent to all utility agencies, responses were received, and no utility relocation is required.

MDOT RESPONSIBILITIES:

1. The MDOT Region/TSC Utilities/Permits Engineer or appropriate representative will notify the Consultant when to proceed with work by issuance of a work authorization. Work authorizations shall identify the project's location, scope, and required "due dates" to complete the utility coordination.

2. Provide the Consultant, when appropriate, survey control to be used for any required surveying the Consultant may need to perform.

3. Provide a preliminary list of utility companies within the project limits. This list may not be 100% accurate and/or complete. The Consultant is responsible to identify all known and unknown utility facilities within the project limits.

4. Provide the Consultant with any appropriate Department form letters.

The Department shall have the authority to suspend the work, in full or in part, for such period or periods as may be deemed necessary due to conditions that are considered unfavorable work performance, or for the failure on the part of the Consultant to comply with any or all provisions of the contract. Such suspension shall be ordered in writing, giving in detail the reasons for the suspension.

ATTACHMENT D
CS 63192 - JN 88080C

CONSTRUCTION CRITICAL PATH NETWORKS

I. INTRODUCTION

The Consultant is required to submit a Construction Critical Path Network at various points in the design process. Refer to the following:

P/PMS TASK 3580 - DEVELOP PRELIMINARY PLANS

P/PMS TASK 3830 - COMPLETE THE CONSTRUCTION ZONE TRAFFIC CONTROL PLAN

P/PMS TASK 3840 - DEVELOP FINAL PLANS AND SPECIFICATIONS

Construction Critical Path Networks are often needed to develop the progress schedule for a project**. They are required on any project designated to include an Incentive/Disincentive or Special Liquidated Damages clause.** Construction Critical Path Networks are also recommended for projects with the following characteristics:

1. New construction.
2. Major reconstruction or rehabilitation on an existing roadway that will severely disrupt traffic.
3. Unique or experimental work.
4. More than one construction season.
5. Complex staging (multiple stages with traffic shifts).

As noted in MDOT's Construction and Technology Instructional Memorandum 1997-7, Progress Schedule Determinations/Critical Path Rates,

> *preparation of a Critical Path is a requirement on all Consultant-designed projects, regardless of the project type or complexity*

The MDOT Resident Engineer assigned to the project should be consulted when developing Construction Critical Path Networks.

MDOT requires the precedence diagramming method. The Consultant will submit this network in MPX version 4.0.

II. NETWORK DEVELOPMENT

The network will be defined using the following steps.

1. Activity definition.
2. Activity sequencing.
3. Duration estimation.
4. Schedule development.

1. ACTIVITY DEFINITION

The Consultant will define the specific activities in enough detail so that the proper objectives will be met. The Consultant must identify assumptions (those factors considered true, real or certain). Supporting detail for the activities should be documented and organized as needed to simplify the review of the activities by MDOT personnel.

The Construction Critical Path Network must start with the **Letting Date** as the first activity and terminate with the **End of Project** as the finish activity.

A sufficient number of activities will be required with sufficient detail so that the controlling construction operation(s) may be identified. Notation on each activity shall include a brief work description and activity time duration.

2. ACTIVITY SEQUENCING

Activity sequencing involves identifying and documenting interactivity dependencies. The Consultant must sequence activities accurately to support later development of a realistic and achievable construction schedule. Two types of dependencies should be considered. Mandatory dependencies are inherent in the nature of the work being done, such as construction sequencing. Discretionary dependencies are based on a knowledge of the work to be done. Constraints are used to show how the activities relate to each. The Consultant must include documentation supporting all discretionary dependencies used in the project. All activities must lead to another activity. Only Start to Start, Finish to Finish and Finish to Start relationships will be allowed. All logic shall show how the given activity is dependent on its preceding activities.

3. DURATION ESTIMATION

After the Consultant has sequenced the activities, the Consultant should determine the activity duration. Activity duration estimating involves assessing the number of work periods likely to be needed to accomplish each activity. Duration (working days): No activity will have a duration greater than 20 working days unless approved by the Engineer. Activities that will be allowed to exceed 20 working days include, but are not limited to, working drawing approvals or other activities not under the control of the Contractor. If requested by the Engineer, the Consultant shall explain the reasonableness of activity time durations. The approved MDOT production rates will be used in

estimating activity duration. These are available in the Supplemental Information section of this attachment. The Consultant must document and submit all assumptions made during the duration estimation to MDOT.

4. SCHEDULE DEVELOPMENT

The activity sequencing, duration estimations and the calendars are combined to create the construction schedule. During the development of the schedule the Consultant will verify:

1. The required schedule to build the project.
2. The constructability of the project.
3. If the maintaining traffic scheme will work.
4. If seasonal limitations will affect the construction.
5. Any other project specific considerations.

The MDOT Calendars will be used by the Consultant in developing the network. The calendars are based on a 4, 5 or 6 day work week. The MDOT Calendars are included in the Supplemental Information section of this attachment.

At this point there should be no negative float in the network. If there is, there is an error in the network and the error must be corrected before network submittal.

All summary tasks shall be removed prior to submittal to MDOT Project Manager

III. DELIVERABLES

After this final step the design Consultant will submit the finished CPM schedule to MDOT

1. Documents

A. 11" x 17" PDF plot of the network. The critical path shall be clearly identified on the plot. A larger plot may be required for complex networks.

B. Work Day / Completion Date Determination Worksheet.

C. List of any other assumptions or controlling factors used in creating the network. For example, permit or maintaining traffic restrictions.

2. Electronic Format

This section sets the requirements for the electronic submittal of the Consultant's Construction Network. All networks shall be submitted on a 3.5 inch floppy disk (or via E-mail) using one of the following formats:

A. **Standard Electronic Media Format:** This is a standard ASCII text file containing the data elements below, in the order specified. This file can be created using any text editor or word processing application (i.e., MS-Word, WordPerfect, Notepad, Write) but must be saved as an ASCII file.

The **first line** will provide a descriptive header describing the submittal and containing:

Control Section
Job Number
Route
Consultant name
Date of Submittal

The next line will be **blank**, followed by multiple data lines.

Each **data line** will contain one record pertaining to one task of the job. Separate data fields by a comma. Fields within each task line are as follows:

(Note that the term "task" is synonymous with "activity." Leave fields that are not required blank)

(1) Task # (Job # followed by a hyphen followed by this task's unique 4 digit task number. This is the Preceding Event Activity Code)
(2) Description of Task, Milestone or Hammock, blank if this record is a constraint
(3) Calendar (see attached list)
(4) Duration of task, blank for constraints
(5) Task # of the next task (Succeeding Event) - leave blank if this record is not a constraint or hammock
(6) Type of constraint (FS, SS, FF) - leave blank if this record is not a constraint.
(7) Delay, if required
(8) Original "Baseline" Start Date
(9) Original "Baseline" Finish Date
(10) Current (forecast) Start Date (early start)
(11) Current (forecast) Finish Date (early finish)
(12) Estimated completion date (if different from early start + current duration)
(13) Late Start Date
(14) Late Finish Date
(15) Actual Start Date
(16) Actual Finish Date

Example - each line contains the following:

Task # (preceding event), Description, Calendar, Duration, Next Task # (succeeding event), Constraint Type, Delay, Baseline Start, Baseline Finish, Early

Start, Early Finish, Estimated Completion Date, Late Start, Late Finish, Actual Start, Actual Finish, Total Float.

B. **Primavera Project Planner(P3) 2.0 Export Procedure:** Users who have Primavera Project Planner(P3) version 2.0 can automatically create an export file by following the export procedure below. **Users having an older version of Primavera may use the applications export feature only if they are able to include all the data elements listed in the version 2.0 format.**

1. Choose Tools, Project Utilities, **EXPORT**
2. Click **ADD**, then click **OK** to accept the next sequential ID number, or type a unique number to identify the specifications and click **OK**
3. Enter a description for the specification in the Title field
4. Specify data items to export

Activities
- Select **Contents of List**
- Use the Description column to specify which data items to export
- To add items, click the right mouse button in the Description column and choose from the list. Suggested Items include: **Activity ID, Activity Description, Actual Start, Actual Finish, Calendar ID, Early Start, Early Finish, Late Start, Late Finish, Original Duration.**
- Select **All Current, All Target**, or **All Target2**
- Set Description Length to 48

OR

Constraints
- Select **Successor relationships** - Choose this option to export Activity IDs and their corresponding successors only. Lags and relationship types will also be displayed in this output file.

5. Click **FORMAT** in Export Dialog Box
6. In the Output file section, enter a new name and path (ex. A:\actexp or A:\conexp). Do not include a file extension.
7. In the type field, click the minimize button and choose the **[.PRN] - ASCII** file format for the output file.
8. Select **CALENDAR** for Date Format
9. Set ASCII Output Field Separation to **1** and Blank column width to **0**
10. Click **RUN**
11. In the Output Options dialog box, click on **OK**

NOTE: A COMPLETED FILE EXPORT WILL CONSIST OF 2 EXPORT FILES (ACTIVITIES & CONSTRAINTS)

C. **Microsoft Project Export Procedure:** Users of Microsoft Project Version 4.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In the Save File as Type box Select **MPX 4.0**
3. On the drive box select a: or whichever drive is the 3.5" Floppy drive
4. Click on **OK**

This saves the file in MPX format.

D. **Primavera Sure Track:** Users of Sure Track Version 2.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In the filename box input a filename
3. In the Save File as Type box Select **MPX**
4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
5. Click on **OK**

This saves the file in MPX format

E. **Scitor Project Scheduler 7 Export Procedure:** Users of Scitor Project Scheduler Version 7 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In filename box select a filename
3. In the Save File as Type box Select MPX
4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
5. Click on **OK**

This saves the file in MPX format

F. **Export Files with Other Scheduling Applications:** Most scheduling packages have export functions similar to those described above. If the Consultant chooses to use packages with export capabilities, they shall include all items listed in the Standard Media Format in a text or ASCII type file.

IV. SUPPLEMENTAL INFORMATION

A. MDOT CRITICAL PATH-CONSTRUCTION TIME ESTIMATES

Drainage

Cross Culverts	
Rural Highways	44 yd./day
Expressways	55 yd./day
Large Headwalls	5 days/unit
Slab or Box Culverts	5 days/pour
Plowed in Edge Drain (production type project)	4921 yd./day
Open Graded Underdrain (production type project)	1312 yd./day
Sewers	
0m-5m(up to 60 in. (1500mm))	44 yd./day
0m-5m(over 60 in. (1500mm))	27 yd./day
5m-over(up to 60 in. (1500mm))	27 yd./day
5m-over(over 60 in. (1500mm))	22 yd./day
Jacked-in-place	14 yd./day
including excavation pit & set up	min. 5 days
Tunnels	
hand mining	9 yd./day
machine mining	22 yd./day
including excavation pit & set up	min. 5 days
Manholes	3 units/day
Catch Basin	4 units/day

Utilities

Water Main(up to 16 in. (400mm))	109 yd./day
Flushing, Testing & Chlorination	4 days
Water Main(20 in. (500mm) – 40 in. (1050mm))	27 yd./day
Flushing, Testing & Chlorination	5 days
Order & Deliver 24 in. (600 mm) HP Water Main	50 days/order
Gas Lines	109 yd./day

Earthwork and Grading	**Metro Exp**	**Rural**
Embankment(CIP)	1962 $yd.^3$/day	6932 $yd.^3$/day

Excavation and/or Embankment(Freeway)	1962 yd.^{3}/day	12033 yd.^{3}/day
Excavation and/or Embankment(Reconstruction)	981 yd.^{3}/day	4970 yd.^{3}/day
Embankment(Lightweight Fill)	392 yd.^{3}/day	785 yd.^{3}/day
Muck(Excavated Waste & Backfill)	1962 yd.^{3}/day	
Excavation(Widening)	656 yd./day	
Grading(G & DS)	820 yd./day	
Subbase and Selected Subbase(up to 8 yd. (7.4m))	656 yd./day	
Subbase and Selected Subbase(8 yd. (7.4 m) & over)	492 yd./day	
Subgrade Undercut & Backfill	1962 yd.^{3}/day	
Subbase & Open-Graded Drainage Course	492 yd./day	

Surfacing

Concrete Pavement (8 ft. (7.3m))	492 yd./day
Including Forming & Curing	min. 7 days
Bituminous Pavement (8 ft. (7.3m))	1312 yd./day/course
Concrete Ramps(5.6 yd. (4.9m))	328 yd./day
Including Forming & Curing	min. 7 days
Curb(1 side)	820 yd./day
Concrete Shoulder-Median	1435 yd.^{2}/day
Bituminous Shoulders(1 side per course)	820 yd./day
Sidewalk	215 yd.^{2}/day
Sidewalk(Patching)	78 yd.^{2}/day

Structures

Sheeting(Shallow)	33 yd./day
General Excavation at Bridge Site	981 yd.^{3}/day
Excavation for Substructure(Footings)	1 unit/day
Piles(12m)	15 piles/day
Substructure(Piers & Abutments)	5 days/unit
Order and Delivery of Beams	
Plate Girders	100-120 days/order
Rolled Beams	90-120 days/order
Concrete Beams	50 days/order
Erection of Structural Steel	3 days/span
Bridge Decks	

Form & Place Reinforcement(66 yd. (60m) Structure)	15 days
Pour Deck Slab(1 1/5 days/pour)	2 days/span
Cure	14 days
2 Course Bridge Decks	
Add 9 days for Second Course Latex	
Add 12 days for Second Course Low Slump	
Sidewalks and Railings	
Sidewalks and Parapets	5 days/span
Slip Formed Barriers	2 days/span
Clean Up	10 days
Pedestrian Fencing	
Shop Plan Approval & Fabrication	1-2 months
Erection	1 week/bridge
Rip Rap Placement	
Bucket Dumped	504 $yd.^3$/day
Bucket Dumped and Hand Finished	171 - 684 $yd.^3$/day
Retaining Walls	1 Panel/day min. 10 days
Railroad Structures	
Grade Temporary Runaround	981 $yd.^3$/day
Ballast, Ties & Track	55 yd./day
Place Deck Plates	5 days/span
Waterproof, Shotcrete & Mastic	5 days/span
Railroad Crossing Reconstruction	10-15 work days
(depends on whether concrete base is involved)	
Temporary Railroad Structures	
Order & Deliver Steel	55 days/order
Erect Steel	1 day/span
Ties and Track	3 days/span
Pumphouse	
Structure	30 days/structure
Order & Deliver Electrical & Mechanical Equipment	90 days

Install Electrical & Mechanical Equipment	30 days

Miscellaneous

Removing Old Pavement	66 yd./day
Removing Old Pavement for Recycling(8 yd. (7.3m))	492 yd./day
Crushing Old Concrete for 6A or OGDC	1485 tons/day
Removing Trees(Urban)	15 units/day
Removing Trees(Rural)	30 units/day
Removing Concrete Pavement	538 $yd.^2$/day
Removing Sidewalk	299 $yd.^2$/day
Removing Curb & Gutter	492 yd./day
Removing Bituminous Surface	1914 $yd.^2$/day
Conditioning Aggregate	984 yd./day
Bituminous Base Stabilizing	2990 $yd.^2$/day
Ditching	656 yd./day
Trenching for Shoulders	820 yd./day
Station Grading	667 yd./day
Clearing	9568 $yd.^2$/day
Restoration(Topsoil, Seeding, Fertilizer & Mulch)	1973 $yd.^2$/day
Sodding	2512 $yd.^2$/day
Seeding	47840 $yd.^2$/day
Guard Rail	252 yd./day
Fence(Woven Wire)	394 yd./day
Fence(Chain Link)	164 yd./day
Clean Up	656 yd./day

Concrete Median Barrier	328 yd./day
Cure	min. 7 days
Reroute Traffic(Add 4 days if 1st item)	1 day/move
Concrete Glare Screen	492 yd./day
Light Foundations	6 units/day
Order & Delivery	6-8 week/order
Remove Railing & Replace with Barrier(1 or 2 decks at a time)	4 days/side
Longitudinal Joint Repair	1750 yd./day
Crack Sealing	5249 yd./day
Joint and Crack Sealing	547 yd./day
Repairing Pavement Joints - Detail 7 or 8	219 yd./day

Seal Coat	6999 lane yd./day
Diamond Grinding/Profile Texturing Concrete	3947 yd.^{2}/day
Rest Area Building	
Order Material	3 months
Construct Building	9 months
Tower Lights	
Order and Deliver Towers	100 days
Weigh-In-Motion	
Order and Deliver Materials	1 month-6weeks
O & D with Installation	3 months
Raised Pavement Markers	300 each/day
Attenuators	2 each/day
Shoulder Corrugations, Ground or Cut	5 - 6 mi./side/day
Aggregate Base	3468 yd.^{2}/day
Aggregate Shoulders	458 yd.^{3}/day
Freeway Signing - 3# Post Type	50 signs/day
Concrete Joint Repair (High Production-Projects with > 1000 patches)	
Average(2 yd. (1.8m))	50 patches/day
Large(>2 yd. (1.8m))	598 yd.^{2}/day
Bridge Painting	108 yd.^{2}/day
Pin and Hanger Replacement	3 beams/day
Order Pin & Hanger	60 days
Bridge Repair	
Scarifying(Including Clean up)	11960 yd.^{2}/day
Joint Removal(Including Clean up)	4 yd./day
Forming & Placement	3.8 yd./day
Hydro-Demolishing	328 yd./day
Barrier Removal	16 yd./day
Placement	49 yd./day
Hand Chipping (Other than Deck)	0.31 yd.^{3}/person/day
Shoulder Corrugations, Ground or Cut	5 - 6 mi./side/day

Casting Latex Overlay	273 yd./day
Curing Overlay	
Regular	4 days
High Early	1 day
Thrie Beam Retrofit	33 yd./day
Beam End Repairs	
Welded Repairs	.75 days/repair
Bolted Repairs	.50 days/repair
Bolted Stiffeners (Pair)	.25 days/repair
Grind Beam Ends	.25 days/repair
Welded Stiffeners (Pair)	.25 days/repair
H-Pedestal Repairs:	
Welded Repair	.50 days/each
Replacement	1 day/each
Deck Removal	281 $yd.^2$/day

Surfacing-Bituminous

Metro-Primary(<(19800 tons (18000mtons))	
Paving	594 tons/day
Joints	164 yd./day
Cold Milling	4066 $yd.^2$/day
Aggregate Shoulders	990 tons/day
Metro Primary(>(19800 tons (18000mtons))	
Paving	594 tons/day
Joints	219 yd./day
Cold Milling	8970 $yd.^2$/day
Metro Interstate(>(19800 tons (18000mtons))	
Paving	1210 tons/day
Joints	394 yd./day
Aggregate Shoulders	990 tons/day
Urban Primary(<(19800 tons (18000mtons))	
Paving	704 tons/day
Joints	109 yd./day
Cold Milling	2033 $yd.^2$/day
Rubblizing	2033 $yd.^2$/day
Aggregate Shoulders	495 tons/day
Urban Primary(>(19800 tons (18000mtons))	
Paving	1100 tons/day
Joints	131 yd./day
Cold Milling	2033 $yd.^2$/day

Aggregate Shoulders	550 tons/day
Urban Interstate(>(19800 tons (18000mtons))	
Paving	1320 tons/day
Joints	241 yd./day
Cold Milling	2033 $yd.^2$/day
Rubblizing	6937 $yd.^2$/day
Aggregate Shoulders	704 tons/day
Rural Primary(<(19800 tons (18000mtons))	
Paving	704 tons/day
Joints	131 yd./day
Cold Milling	649 tons/day
Crush & Shape	11960 $yd.^2$/day
Aggregate Shoulders	704 tons/day
Rural Primary(>(19800 tons (18000mtons))	
Paving	1210 tons/day
Joints	164 yd./day
Cold Milling	880 tons/day
Crush & Shape	11960 $yd.^2$/day
Rural Interstate(>(19800 tons (18000mtons))	
Paving	1329 tons/day
Joints	214 yd./day

B. WORKSHEET

WORK DAY/COMPLETION DATE DETERMINATION

CS: JN:

DESCRIPTION OF WORK: _____

MAJOR WORK ITEM	PRODUCTION QUANTITY	RATE	ESTIMATED TIME

TOTAL ESTIMATED TIME:

COMPLETION DATE: (Calendar Days or Work Days)

COMMENTS:

C. MDOT CALENDARS

The following are the MDOT 4, 5 and 6 day calendars:

CALENDAR	DESCRIPTION	START	FINISH
1	Std - Apr 16 - Nov 15 - 4 day	APR 16	N0V 15
2	LP - Bit Stab - 4 day	MAY 15	OCT 15
3	UP - Bit Stab - 4 day	JUN 01	OCT 01
4	LP S of M-46 - Bit Pave - 4 day	MAY 05	NOV 15
5	LP N of M-46 - Bit Pave - 4 day	MAY 15	NOV 01
6	UP - Bit Pave - 4 day	JUN 01	OCT 15
7	LP - Bit Seal Coat - 4 day	JUN 01	SEP 15
8	UP - Bit Seal Coat - 4 day	JUN 15	SEP 01
9	Tree Planting - Deciduous - 4 day	MAR 01 OCT 01	MAY 15 NOV 15
10	Tree Planting - Evergreen - 4 day	MAR 01	JUN 01
11	South LP - Restoration - 4 day	MAY 01	OCT 10
12	North LP - Restoration - 4 day	MAY 01	OCT 01
13	UP - Restoration - 4 day	MAY 01	SEP 20
14	Full Year - Winter Work - 4 day	JAN 01	DEC 31
21	Std - Apr 16 - Nov 15 - 5 day	APR 16	NOV 15
22	LP - Bit Stab - 5 day	MAY 15	OCT 15
23	UP - Bit Stab - 5 day	JUN 01	OCT 01
24	LP S of M-46 - Bit Pave - 5 day	MAY 05	NOV 15
25	LP N of M-46 - Bit Pave - 5 day	MAY 15	NOV 01
26	UP - Bit Pave - 5 day	JUN 01	OCT 15
27	LP - Bit Seal Coat - 5 day	JUN 01	SEP 15
28	UP - Bit Seal Coat - 5 day	JUN 15	SEP 01
29	Tree Planting - Deciduous - 5 day	MAR 01 OCT 01	MAY 01 NOV 15
30	Tree Planting - Evergreen - 5 day	MAR 01	JUN 01
31	South LP - Restoration - 5 day	MAY 01	OCT 10

32	North LP - Restoration - 5 day	MAY 01	OCT 01
33	UP - Restoration - 5 day	MAY 01	SEP 20
34	Full Year - Winter Work - 5 day	JAN 01	DEC 31
35	Full Year - Expedited - 6 day	JAN 01	DEC 31

ATTACHMENT E
CS 63192 - JN 88080C

MONTHLY PROGRESS REPORTS

The first two pages of this attachment are the necessary layout of the Monthly progress reports and the last three pages are a completed example.

Control Section 00000
Job Number 00000C
Structure Number S00
Date 00/00/00

MONTHLY PROGRESS REPORT

A. Work accomplished during the previous month.

B. Anticipated work items for the upcoming month.

C. Real or anticipated problems on the project.

D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.

E. Items needed from MDOT.

F. Copy of Verbal Contact Records for the period (attached).

Structure Number - Control Section - Job Number
Route, Location Description
Design Schedule as of 00/00/00

LIST TASKS, SUBMITTALS, APPROVALS AND MEETINGS AS OUTLINED IN SCOPE OF DESIGN SERVICES AS NEEDED. THIS LIST IS JUST AN EXAMPLE.

Original Authorized Start Date	Original Authorized Finish Date	(Anticipated) or **Actual** Start Dates	(Anticipated) or **Actual** Finish Dates	Task	Task Description
00/00/00	**00/00/00**	00/00/00	**00/00/00**	??	Initial project meeting.
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3330	Conduct Design Survey
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3360	Prepare Base Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**		Submit Base Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3580	Develop Preliminary Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3390	Develop Construction Zone Traffic Control Concepts
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3540	Develop Construction Zone Traffic Control Plan
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3550	Develop Preliminary Traffic Operations Plan
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3351	Review & Submit of Preliminary Right-Of-Way Plans
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Submittal of The Plan Review Package
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Completion of the Plan Review Meeting
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3840	Develop Final Plans and Specifications
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Submittal of final plans/proposal package to MDOT for final review.
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3870	Omissions/Errors Check (OEC) Meeting
00/00/00	**00/00/00**	00/00/00	**00/00/00**		Consultant's Plan Completion: Final Construction Plan/Proposal package with recommendations incorporated to MDOT (two weeks after OEC Meeting)
00/00/00	**00/00/00**	00/00/00	**00/00/00**		Final Deliverables to MDOT

Control Section 12345
Job Number 11111C
Structure Number S02
Date:

MONTHLY PROGRESS REPORT

A. Work accomplished during the previous month.

1. During the last month we completed the Final Right of Way plans and submitted them to Mr. Project Manager on 00/00/00.

B. Anticipated work items for the upcoming month.

1. Submit the Preliminary Plans and related material on 00/00/00.

2. Attend the meeting regarding the Ameritech lines on the bridge, scheduled for 00/00/00.

C. Real or anticipated problems on the project.

1. We foresee no problems at this time.

D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.

1. The design is falling behind schedule because we had problems resolving the geometries of the ramps in relation to the bridge. The Preliminary Plan submittal will be the only task affected by this delay because we will make up the lost time prior to submitting the Final Plans and Specifications.

E. Items needed from MDOT.

1. Prior to final Plan submittal we will need the latest Special provision and Supplemental Specification checklist.

F. Copy of Verbal Contact Records for the period (attached).

1. Discussed bridge and ramp geometries with Traffic Safety Eng. of MDOT Traffic and Safety Division on 00-00-00.

SN: S02 - CS: 12345 - JN: 11111C
M-111, from There Village Limits to north of That Road
Design Schedule as of 00/00/00

Original Authorized Start Date	Original Authorized Finish Date	(Anticipated) or **Actual** Start Dates	Anticipated) or **Actual** Finish Dates	Task	Task Description
01/12/95	01/12/95	**01/12/95**	**01/12/95**??		Initial project meeting.
01/29/95	01/29/95	**01/30/95**	**01/30/95**3330		Conduct Design Survey.
02/17/95	04/10/95	**02/17/95**	**04/20/95**3360		Prepare Base Plans.
02/29/95	02/29/95	**02/29/95**	**02/29/95**3390		Develop the Construction Zone Traffic Control Concepts
03/12/95	03/13/95	**03/12/95**	(03/30/95)	3540	Develop Construction Zone Traffic Control Plan
03/20/95	03/19/95	**03/25/95**	(03/30/95)	3551	Develop/Review Preliminary Traffic Signal Plan
07/01/95	07/01/95	(07/01/95)	(07/01/95)	3590	The Plan Review Meeting
07/11/95	08/11/95	(07/11/95)	(08/11/95)	3821	Complete/Review Traffic Signal Plan
09/15/95	09/15/95	(09/15/95)	(09/15/95)	3830	Complete Construction Zone Traffic Control Plan.
09/16/95	09/16/95	(09/16/95)	(09/16/95)	3840	Develop Final Plans and Specifications
09/25/95	09/23/95	(09/25/95)	(09/25/95)	3870	Omissions/Errors Check (OEC) Meeting

VERBAL CONTACT RECORD

Control Section 12345
Job Number 11111C
Structure Number S02
Date 00/00/00

Joe Engineer talked to Mr. Traffic and decided to use a 0.05'/ft super on ramp A leading into the bridge.

FOR YOUR INFORMATION

For questions on specific tasks, refer to the P/PMS Task Manual located on the MDOT Bulletin Board System.

For assistance in accessing this manual, please contact one of following:

Dennis Kelley: (517) 373-4614

Tonya Nobach: (517) 335-1927